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SPECIAL ARTICLE.

THE HOME IN ITS RELATION TO THE TUBERCULOSIS PROBLEM.*

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I.

IN its most important aspects the problem of tuberculosis is a home problem. In an immense proportion of all cases the scene of the drama is the home; on its stage the acts are played, whether to the happy issue of a recovery, or to the dark ending of a tragedy, so commonplace as to have dulled our appreciation of its magnitude. In more than 400 homes of this country there are lamentations and woe to-night: husbands for their wives, wives for their husbands, parents for their children, children for their parents. A mere repetition of yesterday's calamities! and if the ears of your hearts are opened you can hear, as I speak, the beating of the wings of the angels of death hastening to the 400, appointed for to-morrow. That this appalling sacrifice of life is in large part unnecessary, that it can be diminished, that there is hope even for the poor consumptive—this represents a revulsion of feeling from an attitude of oriental fatalism which is a triumph of modern medicine. Our French brethren have made the present position of the question possible. Laennec, the father of modern clinical medicine, gave us the pathology of the disease—and much more. While Galen, Frascatorius, Morton and others believed strongly in the contagiousness of phthisis, it remained for Villemin to demonstrate its infectiveness by a series of brilliant experiments which made Koch's work inevitable; while to Verneuil, Chauveau, Nocard, Brouardel and others we owe the initiation of those local and international congresses which have done so much to rend the veil of familiarity, and to educate the public and the profession to a point at which scientific knowledge has become effective. It seems a law that all great truths have to pass through a definite evolution before they reach a stage of practical utility. First the pioneers, seeing as through a glass darkly groped blindly for the truth, but worked so effectually that by the seventh decade of the nineteenth century we had a clear pathology of tuberculosis and an accurate symptomatology; while in each generation a man had not been wanting, who, like Sydenham, or George Bodington, appreciated the essentials of treatment, as we recognize them to-day. Then Villemin and Koch demonstrated the truth of the infectivity of the disease and the presence of a specific germ. Watchers on the towers, like the late Austin Flint, a lifelong student of the disease, welcomed the announcement as the much-wished-for fulfilment of a prophecy; but, as Plato shrewdly remarks, we are not all awake when the dawn appears, and many in this audience, like myself, had to see the truth grow to acceptance with the generation in which it was announced. It is a horrible thought, but very true, that we reach a stage in life, some earlier, some later, in which a new truth, a perfectly obvious truth, cannot be accepted; and the work of Villemin and of Koch fared no whit better with the seniles and the pre-seniles of the seventh and eighth decades of the last century than did Harvey's immortal discovery in his day, or for the matter of that, did Lister's great work. And now we are in the third or final stage, in which the truth is becoming an effective weapon in the hands of the profession and of the public. The present crusade against tuberculosis, which is destined to achieve results we little dream of, has three specific objects; first, educational—the instruction of the profession and the instruction of the people; second, preventive—the promotion of measures which will check the progress of the disease in the community; third, curative—the study of methods by which the progress of the disease in individuals may be arrested or healed. The three are of equal importance, and the first and the second closely related and interdependent. The educational aspects of the problem are fundamental. Nothing can be done without the intelligent cooperation of the general practitioners and of the community, and it is a wise action on the part of the Phipps Institute to take up actively this part of the work, and to spread a sound knowledge by lecture courses and by publications. It is not too much to say that could we get on the part of the doctors throughout the country an early recognition of the cases, with a practical conviction of the necessity of certain urgent and obvious measures, and on the part of the public attention to hygienic laws of the most elementary sort—could we in this way get the truth we know into the stage of practical efficiency, the problem would be in sight of solution.

Of late years there have been done in this country three pieces of work relating to tuberculosis of the first rank—that of Trudeau in the Adirondacks, enforcing on our minds the importance of the sanitarium treatment of early cases; that of Biggs and his associates in the New York Board of Health in demonstrating how much can be done by an efficient organization; and, thirdly, the work of Lawrence F. Flick, the Director of the Phipps Institute, in demonstrating by a long and laborious research the dangers of the house

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in the propagation of the disease. In casting about for a subject it seemed to me most appropriate to discuss those aspects of the problem which concern the home in its relations to the disease, since after all the battlefield of tuberculosis is not in the hospitals or in the sanitaria, but in the homes, where practically the disease is born and bred.

II.

The germ of tuberculosis is ubiquitous; few reach maturity without infection; none reach old age without a focus somewhere. This is no new opinion. Gideon Harvey, in his *Morbus Anglicus* (1672, 2d. Ed.), says: "It's a great chance we find, to arrive to one's grave in this English climate, without a smack of a consumption, Death's direct door to most hard students, divines, physicians, philosophers, deep lovers, zealots in religion," which is the English equivalent of the German popular saying, "Jedermann hat am Ende ein bischen Tuberculose." This may seem an exaggerated statement, but the records of Naegeli demonstrate its truth. After all, it is only from the post-mortem table that we can get a true statement of the frequency of tuberculosis in the community. It has long been known that a very considerable percentage of persons not dying from consumption have the lesions of tuberculosis. The records have ranged in different series from 7.5 per cent. (Osler), to 38.8 per cent. (Harris). But these studies were not made directly with a view of determining the presence of tuberculosis. They were the ordinary, everyday observations of the post-mortem room. The only series which we have dealing with this question in a satisfactory way is the study of 500 post mortems in Prof. Ribbert's Institute in Zurich, by Naegeli. It is to be borne in mind that in his work special examination was made of every organ of the body, sections were made of all parts with the greatest care, and the individual lymph glands particularly inspected. Tuberculous lesions were found in 97 per cent. of the bodies of adults.* He gives a very interesting curve showing the incidence at different ages. Up to the fifteenth year there was only 50 per cent., then there was a sudden rise in the eighteenth year to 96 per cent., with a slow rise, so that by the fortieth year a tuberculous focus was found in everybody. This careful research demonstrates the extraordinary susceptibility in man to tuberculous infection, and an equally extraordinary degree of resistance. In the tuberculin experiments of Franz on healthy Austrian soldiers a reaction was shown in over 60 per cent., so that we must accept the conclusion that tuberculous infection, latent tuberculosis, is much more extensive than is the manifest disease.

One interesting point is that we are never left long in peaceful possession of a satisfactory belief about the modes of infection in tuberculosis. No sooner had the pool got quiet and we had settled into a comfortable conviction of the unity of human and bovine tuberculosis, than Koch stepped in and troubled the waters with his views on their dual nature; and now, just as the commotion was subsiding, von Behring stirs the waters by referring all tuberculosis to the milk-jug. But none of these investigations have diminished the importance of the home as the chief source of infection, the place in which the conditions favoring contamination are most common, particularly among the poor. Nor do I think that we can give up the view of aerial convection and of primary inhalation infection in a large proportion of the cases. Figures are, of course, tricky playthings, but it does seem that the overwhelming evidence of the prevalence of bronchial and pulmonary tuberculosis in children is in favor of the older views. After all, how rare is intestinal tuberculosis as a primary lesion, and if, as von Behring supposes, there is a special vulnerability of the bowels in childhood, we should expect a much larger number of cases. It is quite possible, as he has shown, and as Ravenel has demonstrated, that the bronchial and cervical lymph glands may be the first attacked in an animal infected through the intestines; yet the incidence in childhood of respiratory disease is so large, and the incidence of intestinal lesions is so small, that it counts strongly against von Behring's new views. In fact, primary intestinal tuberculosis is extraordinarily rare. Koch states that there have only been ten cases in ten years at the Charité Hospital, Berlin, and of 3,104 instances of tuberculosis in children there were, according to Biedert, only 16 cases, while in adults primary intestinal tuberculosis occurred in but one instance in 1,000 autopsies at the Munich Pathological Institute. In this country the studies of Bovaird in New York and of Hand in Philadelphia speak strongly in favor of air-borne infection in the large majority of cases in children. There is a special liability of the milk to become contaminated by the dust in uncleanly streets and in dirty houses, and upon this mode of infection von Behring lays great stress, and in infancy, either in this way or from the milk of tuberculous cows, he thinks the majority of persons become infected. Apparently he does not adopt Baumgarten's view of the latency of the germ itself, but of the latency of small foci of disease acquired in childhood, which only develop into active tuberculosis under favorable circumstances. It may be well to quote his own words in this connection, as his views are of importance: "I am well acquainted with the statistical arguments based on the higher returns of infection and mortality from consumption amongst attendants on the sick residents in houses occupied by people known to be phthisical, and inmates of prisons, which are intended to demonstrate the origin of pulmonary phthisis from the inhalation of particles of dust, or moisture containing tubercle bacilli. But in view of the extensive dissemination of tuberculosis above described amongst the human race, there is ample justifi-

* Virchow's Archiv, 1900, Bd. CLX, page 426.

cation for the objection that in cases of this kind, where persons succumb to pulmonary phthisis, tuberculous foci pre-exist in their lungs, and that these pulmonary lesions already present developed into active consumption, owing to the adoption by those persons of a mode of life favoring tuberculosis." (*British Medical Journal*, Translation Oct. 17, 1903.)

We need a systematic inspection, according to Naegeli's method, of the bodies of children dead of acute diseases, so as to get, if possible, the true incidence of infection in them. Councilman and others have shown how frequently tuberculosis is present in the bodies of young children dead of diphtheria, but the statistics at our disposal certainly do not bear out this view of von Behring, which would lead us to suppose that infection was largely a matter of childhood. Naegeli's figures on this point are interesting, though he only had 88 autopsies on children. Still his results are of value, as the inspections were made with such very special care. Of these 88 children there were only 15 with tuberculous lesions. In 10 of these the tuberculosis ran a fatal course; in 4 there were advanced lesions which did not cause death, and in only 1 was there a definitely healed lesion.

Sown broadcast as they are in our modern life, it is evident that few people reach maturity without harboring the seeds of tuberculosis. That we do not all die of the disease is owing to the resistance of the tissues, in other words, to an unfavorable, *i.e.*, the rocky soil on which the seeds have fallen. The parable of the sower sets forth in an admirable way the story of the disease. Since I used it in 1892, the illustration has become hackneyed, but in a semi-popular lecture I may be permitted to employ it again. The seed that falls by the wayside are the bacilli that reach our great highways, the air passages and intestines, in which they are picked up by the phagocytes, representing the birds of the air, or they are trodden under foot by the swarms of contending organisms. The seed that falls on stony places is that which reaches the lymph-nodes of the bronchi and mesentery, and though it springs up and flourishes for a while, there is no depth of earth, and, lacking moisture, it withers away into cretaceous healing. And that which falls among thorns represents the bacilli which effect a lodgment in the lungs, the kidneys or elsewhere, where they thrive and grow and produce extensive changes, but the thorns—the equivalent of the cares of this world and the deceitfulness of riches, in the parable—grow up also, and in the form of delimiting inflammatory processes and of contracting fibrosis, choke the seed, and recovery ultimately takes place. But falling on good ground, the seed springs up, increases and brings forth fruit some thirty, some sixty and some a hundredfold, which may be taken to represent the cases of chronic, subacute and acute tuberculosis. We are beginning to appreciate that the care of the soil is quite as important as the care of the seed. We cannot repeat Trudeau's remarkable environment experiment in our cities, but we learn a practical lesson of the influence of fresh air, open spaces and sunlight upon infected individuals. Much has already been done in this direction, and the reduction of the mortality from tuberculosis which has been going on for the past twenty-five years has been in great part due to improved sanitation. We have only made a beginning, but to know the enemy in this case, to know that his strength lies in the homes of the poor, is more than half the battle.

Let us look at the conditions confronting us in one of the large eastern cities. Like Philadelphia, Baltimore is fortunate in the absence of big tenement houses, but, like it, too, it has the disadvantage of a large number of very narrow streets and alleys. There is no drainage system, the sewerage is collected into cesspools, while the surface water and the water from the kitchens runs off on surface drains. There is a very large foreign population and a large number of colored people. While tuberculosis is a very common disease, I do not think the mortality in Baltimore is specially high. In the report of the Board of Health for the year 1901, there were 1,274 deaths from the disease in a total mortality of 10,479, about 12 per cent.

Four years ago two ladies, interested in the disease, gave me a sum of money to use in connection with our work at the Johns Hopkins Hospital. We do not take many cases of tuberculosis into the wards. Last year there were only 53. They come chiefly for the purpose of diagnosis, and we often admit patients from outside the city on purpose to teach them for a period of a week or ten days, just how to regulate their lives. It seemed best to try to do something for our consumptive out-patients, of whom we have an average of about 200 new cases in the year. It seemed to me that a good and useful work could be done by the personal visits of an intelligent woman to the houses of these patients, that she might show them exactly how to carry out the directions of the physician and give them instructions as to the care of the sputum, the preparation of food, and when necessary to report to the Charity Organization as to the need of special diet, or to the Health Board when the surroundings were specially unsanitary. In connection with this an inspection has been made of the condition under which these people live. Of the 726 cases, 545 were whites, and 181 blacks. Among the whites were 53 Russian Jews. There were 492 males, 234 females. The analysis of the reports of Miss Dutcher, Miss Blauvelt and Miss Rosencrantz during the past four years is briefly as follows:

	Russian	Colored	White
Bad sanitary location	62%	53%	16%
Insufficient light and ventilation	71%	65%	39%
Overcrowding	61%	41%	32%
Personal and household uncleanliness	70%	56%	30%

The white population in a large majority of the cases was distributed irregularly throughout the city, but a large proportion live in good loca-

tions, many even on new streets in the suburbs. A small percentage, about 20, live in a bad neighborhood, where the houses are close together and hemmed in in narrow alleys and courts. This region lies chiefly to the south and west of the hospital toward the harbor. In about a third of these people the personal and household cleanliness is fairly good. The colored people make up about a fourth of the cases. They live in much more unfavorable localities, chiefly in narrow, thickly populated and dirty alleys in small, two-story houses, usually old, and the windows often limited to the front—houses in which proper lighting and ventilation are impossible. One important feature in the colored population is the desire always to occupy their own houses, so that there is a comparatively little overcrowding. The Russian Jews form about one-fourteenth of the total number of patients. They live in a neighborhood that was at one time inhabited by the wealthier classes and the houses have now been converted into tenements. The streets are in many cases wide and clean and sunny. The percentage of overcrowding in the rooms is high. Very often a family of seven or eight is found in two rooms. The contrast in the matter of personal and household cleanliness between the Russians and the other whites is most striking. It is exceptional to find the former in a condition, either in person or house, that could be termed in any way cleanly. A very serious thing is the frequency with which the patients move from one place to another. The 726 patients had during their illnesses occupied 935 houses. Last year the percentage of removals was still higher. The 183 patients had occupied 379 houses. Another important point brought out was the fact that fully 66 per cent. of the patients visited did not sleep alone.

Amid such sanitary surroundings the patient can scarcely avoid contaminating the house in which he lives, while, perhaps more important still, the environment, combined with insufficient food, etc., lowers the resistance of the other members of the family and renders them more liable to active disease.

How are we to combat these conditions? *First,* by an educational health campaign in the homes. The young women who have been engaged in this work in Baltimore have frequently reported to me the readiness with which their suggestions have been accepted, particularly in regard to the care of the sputum. To be successful such a campaign must be carried out by the Board of Health, and a staff of trained visitors, women preferably, should do the work. To carry this out effectually there should be, *secondly,* in all cities a compulsory notification of cases. The plan has worked most successfully in New York, and it should be everywhere followed. There are no difficulties which cannot be readily surmounted, and there need be no hardships. *Thirdly,* in most cities the powers of the Health Boards should be greatly enlarged, so as to deal efficiently with the question of proper disinfection of the houses occupied by tuberculous patients. *Fourthly,* the question of the housing of the poor needs attention, particularly in the matter of proper control of tenements, and the regulation, by law, of the number of persons in each house. *Fifthly,* by placing upon the landlord the responsibility of providing, under the control of the Board of Health, a clean, wholesome house for a new tenant. *Sixthly,* the wholesale condemnation of unsanitary streets and blocks, and the rebuilding by the municipality, as has been done in Glasgow and elsewhere. We cannot make people cleanly or virtuous by act of the legislature, at the same time we cannot leave important sanitary details in the hands of irresponsible persons whose view of life is limited to returns and rentals. The extraordinary reduction in the mortality from consumption in the large cities is due directly to an improvement in environment. That much more remains to be done in the way of betterment the facts I have presented fully show.

III.

And then we have to face the all-important fact that at present an immense majority of all tuberculous patients have to be treated at home. Probably not 2 per cent. of the cases can take advantage of sanitarium or climatic treatment. What has the new knowledge to say to the 98 per cent., which is debarred from the enjoyment of these two great *adjutores vitæ?* Very much! Read aright, a message of hope to many. Just as we have learned that climate in itself is not the prime essential, but a method of life in any clime, so we have found that even under the most unfavorable surroundings many cases recover in town and country, if rigid system and routine are enforced. But "Hope, that comes to all," as the poet sings, comes not to the large proportion of the unhappy victims in our overgrown and crowded cities. What but feelings of despair can fill the mind in the contemplation of facts such as I have laid before you in the analysis of our inspection in Baltimore? So numerous are the patients that private beneficence shrinks at a task, which the city and State authorities have not yet mustered courage to attack, except in one or two places. Hospital care for advanced cases, sanitarium treatment for incipient cases can only be provided by an enormous expenditure, but we must not be discouraged, and the good work begun in Massachusetts, New York and in this State will grow and prosper. After all, the campaign in which we are engaged is one of education; only let us not forget that teaching has not all been on the side of the profession. We have all been at school during the past quarter of a century, and at school we must remain, at once teachers and pupils, if we are to make the knowledge we possess effective. We are not living in Utopia, and in the matter of sanitation the man on the street is a blundering, helpless creature whose lessons are put bodily into him at a heavy cost of life and health. You know this story only too well in Philadelphia. To provide accommo-

dation for all consumptives is impossible, but it is not unreasonable to look forward to the day when every large city will have a sanitarium for the treatment of the early cases, situated not far from its outskirts, with all the equipment for open-air treatment. Let there be some place at least where a poor workingman or working woman may have a chance for life. Now, as we doctors know only too well, hundreds are sacrificed in whom the disease could have been arrested. The hospital care of the very sick should be provided for in special wards of the city hospitals. To give the best of care to these unhappy victims is a true charity to them; to place them where they cease to be a danger to the general health is a true charity to others.

In the warfare against tuberculosis the man behind the gun is the general practitioner. The battle cannot be won unless he takes an active, aggressive, accurate part. That he is not always alert must be attributed in part to the carelessness which a routine life readily engenders, and partly to a failure to grasp the situation in individual cases. The two points to be impressed upon him are first, *that early recognition of the disease can only come from better methods of practice and greater attention to the art of diagnosis.* The insidiousness of the onset, the protean modes of advance, and the masked features of even serious cases should never be forgotten. As Garth so well puts it in his Dispensary (1699):

"Whilst meagre *Phthisis* gives a silent blow;
Her *stroaks* are sure; but her advances slow.
No loud alarms, nor fierce assaults are shown,
She starves the *fortress* first, then takes the *town.*"

Too often precious time is wasted and the golden opportunity is lost by the failure of the physician to make a thorough examination of the chest. I am every day impressed with the necessity of more rigid, routine examination, even of the "ordinary case." In illustration of the carelessness which is so readily acquiesced in, let me mention a patient who was brought to me only a few weeks ago, supposed to have a protracted fever after typhoid. Her father, a physician, her husband a physician, and it is scarcely credible that neither of them had the faintest idea that the poor soul had advanced consumption, though it had reached a stage in which there was shrinkage of one side of the chest, and the diagnosis could almost be made by inspection alone. The carelessness is a sort of mental inadvertence, to which even the best of us at times seem liable. A very distinguished and careful physician brought his daughter to me a few years ago to have her blood examined, as he felt sure she had a chronic malaria. She had little or no cough, but an afternoon rise of temperature, and it turned out to be the usual story—quite pronounced local disease at her left apex. There had not been a suspicion on the part of her father or of the family.

On the other hand, we must be careful not to diagnose tuberculosis too readily. The physicians of our sanitaria have a good many tales to tell in this matter.

The second point is the *necessity for a more masterful management of the early cases.* Here comes in that personal equation so important in practice, and which has such a vital bearing in the prognosis of the disease. The dead hand of the Arabian still presses sore upon our practice, and precious weeks are too often lost in trusting to a polypharmacy which in some instances would make the heart of Avicenna or Averroes to rejoice. It may seem hard to say so, but my firm conviction is that more tuberculous patients are injured than helped by drugs. We have not yet come to the belief—to the practical belief, at any rate—that the disease is not to be *treated* by them. After so much has been written and spoken, one would suppose that the essential features of the treatment of the disease were generally recognized, but the practical experience of any man who sees a great deal of tuberculosis is directly to the contrary. It is not so much that the drugs do harm *per se*, but that weeks of priceless value are lost in trying to check a cough and quiet a fever in a patient who is allowed to continue his work and is up and about. I cannot agree with a recent writer who says that the tendency at present is rather to make too little than too much of medicinal treatment. Perhaps in advanced cases we are more sparing, but in early stages *I know* that we are still leaning on the Egyptian reed in which our fathers trusted and trusted in vain. Year by year I see only too many instances in which the mental attitude of the physician toward the disease clearly indicates that the idea of an efficient home treatment by fresh air had never been entertained. What I would like to plead for most earnestly is this home treatment of early cases by modern methods. I am not addressing myself now to city physicians. But I would appeal to the practitioners in the country and in the smaller towns and in the suburbs, where the conditions are so much more favorable. I have been much interested for several years past in a group of cases scattered all over the country, usually in the farmer or mechanic class, in which I have supervised with the physician a home treatment, often with striking success. The remarkable case which I reported in 1900 gave me great encouragement, as the complete arrest of the disease was accomplished under the most primitive surroundings by the persistence and devotion of the patient herself, who richly deserves the good health she enjoys to-day. There have been disappointments; all cases are not suitable, all cases are not curable, and it is not easy to say which ones are likely to do well. The most favorable looking patient with a small patch at one apex may have a progressive disease and die in the best of surroundings, while a case with high fever, sweats and an extensive lesion may improve rapidly. On November 24, a fine, stalwart fellow came to see me, in whom I did not recognize the *poitrinaire,* of September 28, carrying his diagnosis in his

face. The sunshine and open air of a Maryland village had been enough; enough, at any rate, to put him on the high road.

Let me mention in a few words the essentials in this home treatment of consumption in the small towns, country places and the suburbs of our large cities. *First,* the confidence of the patient, since confidence breeds hope; *secondly,* a masterful management on the part of the doctor; *thirdly,* persistence—*benefit is usually a matter of months, complete arrest a matter of years, absolute cure a matter of many years; fourthly,* sunshine by day; fresh air night and day; *fifthly,* rest while there is fever; *sixthly,* breadstuffs and milk, meat and eggs.

Let us not forget that it was a country practitioner, George Bodington, of the little town of Sutton Coldfields, in Warwickshire, who, in 1840, revived the open air treatment of tuberculosis. "To live in and breathe freely the open air, without being deterred by the wind or weather, is one important and essential remedy in arresting its progress—one about which there appears to have generally prevailed a groundless alarm lest the consumptive should take cold." And he gives a number of cases showing the good effects of the open air treatment. He seems to have carried it out on the plan which was so strongly advocated by Sydenham, which was a combination of open air and riding or carriage exercise. There are few things more striking in the writings of Sydenham than the insistence with which he states that consumption is curable. It is worth quoting a paragraph which I take from Locke's Anecdota Sydenhamiana, as it is put in a more striking way than in his general work. "I am sure that if any physician had a remedy for the cure of a phthisis of equal force with this of riding he might easily get what wealth he pleased: In a word, I have put very many upon this exercise in order to the cure of consumptions, and I can truly say I have missed the cure of very few; in so much that I think how fatal soever this disease be above all others, and how common soever; (for almost two-thirds that die of chronical diseases die of a phthisis), yet it is this way more certainly cured than most diseases of less moment: Provided always that this travelling be long persisted in according to the age of the patient, and length of the disease. . . . Women or very weak men that cannot ride on horseback may ride in a coach and yet attain the same end, as I have seen by often experience." In reality this practice of Sydenham never died out, but it was in practice in New England in the early days and throughout the eighteenth century. The late Henry I. Bowditch, who did so much to further the study of tuberculosis in this country, states that he followed it in his own case.

Let me conclude with a quotation from De Quincy, which puts in graphic language the question which so many generations have asked and asked in vain, but which we have been permitted to answer in part at any rate, and to answer in hope. "If you walk through a forest at certain seasons, you will see what is called a *blaze* of white paint upon certain *élite* of the trees marked out by the forester as ripe for the axe. Such a blaze, if the shadowy world could reveal its futurities, would be seen everywhere distributing its secret badges of cognizance amongst our youthful men and women. Of those that, in the expression of Pericles, constitute the vernal section of our population, what a multitudinous crowd would be seen to wear upon their foreheads the same sad ghastly blaze, or some equivalent symbol of dedication to an early grave. How appalling in its amount is this annual slaughter among those that should by birthright be specially the children of hope, and levied impartially from every rank of society! Is the income-tax or the poor-rate, faithful as each is to its regulating time-tables, paid by *any* class with as much punctuality as this premature *florilegium,* this gathering and rendering up of blighted blossoms by *all* classes? Then comes the startling question—that pierces the breaking hearts of so many thousand afflicted relatives: "Is there no remedy? Is there no palliation of the evil?" It is one of the greatest triumphs of scientific medicine to be able to reply, Yes, the evil may be palliated and is rapidly being lessened, and for many at least, a remedy has been found.